

Sequence Listing

```
<110> Baker, Kevin
Botstein, David
Eaton, Dan
Ferrara, Napoleone
Filvaroff, Ellen
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul
Grimaldi, Christopher
Gurney, Austin
Hillan, Kenneth
Kljavin, Ivar
Napier, Mary
Roy, Margaret
Tumas, Daniel
Wood, William
```

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
ACIDS ENCODING THE SAME

<130> P2548P1C1

<150> 60/067,411

<151> December 3, 1997

<150> 60/069,334

<151> December 11, 1997

<150> 60/069335

<151> December 11, 1997

<150> 60/069,278

<151> December 11, 1997

<150> 60/069,425

<151> December 12, 1997

<150> 60/069,696

<151> December 16, 1997

<150> 60/069,694

<151> December 16, 1997

<150> 60/069,702

<151> December 16, 1997

<150> 60/069,870

<151> December 17, 1997

<150> 60/069,873

<151> December 17, 1997

<150> 60/068,017

<151> December 18, 1997

<150> 60/070,440

<151> January 5, 1998
 <150> 60/074,086
 <151> February 9, 1998
 <150> 60/074,092
 <151> February 9, 1998
 <150> 60/075,945
 <151> February 25, 1998
 <150> 60/112,850
 <151> December 16, 1998
 <150> 60/113,296
 <151> December 22, 1998
 <150> 60/146,222
 <151> July 28, 1999
 <150> PCT/US98/19330
 <151> September 16, 1998
 <150> PCT/US98/25108
 <151> December 1, 1998
 <150> 09/216,021
 <151> December 16, 1998
 <150> 09/218,517
 <151> December 22, 1998
 <150> 09/254,311
 <151> March 3, 1999
 <150> PCT/US99/12252
 <151> June 22, 1999
 <150> PCT/US99/21090
 <151> September 15, 1999
 <150> PCT/US99/28409
 <151> November 30, 1999
 <150> PCT/US99/28313
 <151> November 30, 1999
 <150> PCT/US99/28301
 <151> December 1, 1999
 <150> PCT/US99/30095
 <151> December 16, 1999
 <150> PCT/US00/03565
 <151> February 11, 2000
 <150> PCT/US00/04414
 <151> February 22, 2000

FOUO "49947650"

<150> PCT/US00/05841
<151> March 2, 2000

<150> PCT/US00/08439
<151> March 30, 2000

<150> PCT/US00/14042
<151> May 22, 2000

<150> PCT/US00/20710
<151> July 28, 2000

<150> PCT/US00/32678
<151> December 1, 2000

<150> PCT/US01/06520
<151> February 28, 2001

<160> 120

<210> 1
<211> 2454
<212> DNA
<213> Homo Sapien

094364-08001
<400> 1
ggactaatct gtgggagcag tttattccag tatcaccag ggtgcagcca 50
caccaggact gtgttgaagg gtgttttttt tcttttaaata gtaataacct 100
ctcatctttt cttcttacac agtgtctgag aacatttaca ttatagataa 150
gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200
cagtcctaga ctggtcttct acactaagac accatgaagg agtatgtgct 250
cctattattc ctggctttgt gctctgccaa acccttcttt agcccttcac 300
acatcgcaact gaagaatatg atgctgaagg atatggaaga cacagatgat 350
gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400
tccaacaaga gagccaagaa gccatttttt tccatttgat ctgtttccaa 450
tgtgtccatt tggatgtcag tgctattcac gagttgtaca ttgctcagat 500
ttaggtttga cctcagtcac aaccaacatt ccatttgata ctgcaatgct 550
tgatcttcaa aacaataaaa ttaaggaaat caaagaaaat gattttaaag 600
gactcacttc actttatggt ctgatcctga acaacaacaa gctaacgaag 650
attcacccaa aagcctttct aaccacaaag aagttgcgaa ggctgtatct 700
gtcccacaat caactaagtg aaataccact taatcttccc aaatcattag 750
cagaactcag aattcatgaa aataaagtta agaaaataca aaaggacaca 800

ttcaaaggaa tgaatgcttt acacgttttg gaaatgagtg caaacccctct 850
 tgataataat gggatagagc caggggcatt tgaaggggtg acggtgttcc 900
 atatcagaat tgcagaagca aaactgacct cagtccctaa aggcttacca 950
 ccaactttat tggagcttca cttagattat aataaaattt caacagtgga 1000
 acttgaggat tttaaacgat acaaagaact acaaaggctg ggcctaggaa 1050
 acaacaaaat cacagatata gaaaatggga gtcttgctaa cataccacgt 1100
 gtgagagaaa tacatttgga aaacaataaa ctaaaaaaaaaa tcccttcagg 1150
 attaccagag ttgaaatacc tccagataat cttccttcat tctaattcaa 1200
 ttgcaagagt gggagtaaata gacttctgtc caacagtgcc aaagatgaag 1250
 aaatctttat acagtgaat aagtttattc aacaacccgg tgaaataactg 1300
 ggaaatgcaa cctgcaacat ttcgttgtgt ttgagcaga atgagtgttc 1350
 agcttgggaa ctttggaatg taataattag taattggtaa tgtccattta 1400
 atataagatt caaaaatccc tacatttgga atacttgaac tctattaata 1450
 atggtagtat tatatatata agcaaatatc tattctcaag tggtaagtcc 1500
 actgacttat tttatgacaa gaaatttcaa cggaattttg ccaaactatt 1550
 gatacataag ggggtgagag aaacaagcat ctattgcagt ttcctttttg 1600
 cgtacaaatg atcttacata aatctcatgc ttgaccattc ctttcttcat 1650
 aacaaaaaag taagatatc ggtatttaac actttgttat caagcacatt 1700
 ttaaaaagaa ctgtactgta aatggaatgc ttgacttagc aaaatttgtg 1750
 ctctttcatt tgctgttaga aaaacagaat taacaaagac agtaattgta 1800
 agagtgcatt aactattct tattctttag taacttgggt agtactgtaa 1850
 tatttttaat catcttaaag tatgatttga tataatctta ttgaaattac 1900
 cttatcatgt cttagagccc gtctttatgt ttaaaactaa tttcttaaaa 1950
 taaagccttc agtaaattgt cattaccaac ttgataaatg ctactcataa 2000
 gagctggttt ggggctatag catatgcttt ttttttttta attattacct 2050
 gatttaaaaa tctctgtaaa aacgtgtagt gtttcataaa atctgtaact 2100
 cgcattttta tgatccgcta ttataagctt ttaatagcat gaaaattgtt 2150
 aggctatata acattgccac ttcaactcta aggaatattt ttgagatata 2200
 cctttggaag accttgcttg gaagagcctg gacactaaca attctacacc 2250

```

aaattgtctc ttcaaatacg tatggactgg ataactctga gaaacacatc 2300
tagtataact gaataagcag agcatcaaat taaacagaca gaaaccgaaa 2350
gctctatata aatgctcaga gttctttatg tatttcttat tggcattcaa 2400
catatgtaaa atcagaaaac agggaaattt tcattaaaaa tattgggttg 2450
aaat 2454

```

```
<210> 2
<211> 379
<212> PRT
<213> Homo Sapien
```

Ile	Glu	Pro	Gly	Ala	Phe	Glu	Gly	Val	Thr	Val	Phe	His	Ile	Arg	215	220	225
Ile	Ala	Glu	Ala	Lys	Leu	Thr	Ser	Val	Pro	Lys	Gly	Leu	Pro	Pro	230	235	240
Thr	Leu	Leu	Glu	Leu	His	Leu	Asp	Tyr	Asn	Lys	Ile	Ser	Thr	Val	245	250	255
Glu	Leu	Glu	Asp	Phe	Lys	Arg	Tyr	Lys	Glu	Leu	Gln	Arg	Leu	Gly	260	265	270
Leu	Gly	Asn	Asn	Lys	Ile	Thr	Asp	Ile	Glu	Asn	Gly	Ser	Leu	Ala	275	280	285
Asn	Ile	Pro	Arg	Val	Arg	Glu	Ile	His	Leu	Glu	Asn	Asn	Lys	Leu	290	295	300
Lys	Lys	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Leu	Lys	Tyr	Leu	Gln	Ile	305	310	315
Ile	Phe	Leu	His	Ser	Asn	Ser	Ile	Ala	Arg	Val	Gly	Val	Asn	Asp	320	325	330
Phe	Cys	Pro	Thr	Val	Pro	Lys	Met	Lys	Lys	Ser	Leu	Tyr	Ser	Ala	335	340	345
Ile	Ser	Leu	Phe	Asn	Asn	Pro	Val	Lys	Tyr	Trp	Glu	Met	Gln	Pro	350	355	360
Ala	Thr	Phe	Arg	Cys	Val	Leu	Ser	Arg	Met	Ser	Val	Gln	Leu	Gly	365	370	375
Asn	Phe	Gly	Met														

<210> 3
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 3
 ggaaatgagt gcaaaccctc 20

<210> 4
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 4
 tcccaagctg aacactcatt ctgc 24

<210> 5
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 5
gggtgacggt gttccatata agaattgcag aagcaaaact gacctcagtt 50

<210> 6
<211> 3441
<212> DNA
<213> Homo Sapien

<400> 6
cggacgcgtg ggcggacgcg tgggcccgcg gcaccgcccc cggcccggcc 50
ctccgccctc cgcactcgcg cctccctccc tccgcccgtt cccgcgccct 100
cctccctccc tctcccccag ctgtcccgtt cgcgtcatgc cgagcctccc 150
ggccccgcgg gccccgctgc tgctcctcgg gctgctgctg ctcggtctcc 200
ggccggcccc cggcgccggc ccagagcccc ccgtgctgcc catccgttct 250
gagaaggagc cgtgccccgt tcggggagcg gcaggctgca ccttcggcgg 300
gaaggtctat gccttgagc agacgtggca cccggacctt gggcagccat 350
tcgggggtgat gcgctgcgtg ctgtgcgcct gcgaggcgcc tcagtggggt 400
cgccgtacca ggggccctgg cagggtcagc tgcaagaaca tcaaaccaga 450
gtgccaacc cgggcctgtg ggcagccgcg ccagctgccg ggacactgct 500
gccagacctg cccccaggag cgcagcagtt cggagcggca gccgagcggc 550
ctgtccttcg agtatccgcg ggaccgcggag catcgagtt atagcgaccg 600
cggggagcca ggcgctgagg agcgggcccc tgggtgacggc cacacggact 650
tcgtggcgct gctgacaggg ccgaggtcgc aggcgggtggc acgagcccga 700
gtctcgctgc tgcgtcttag cctccgcttc tctatctcct acaggcggct 750
ggaccgccct accaggatcc gcttctcaga ctccaatggc agtgtcctgt 800
ttgagcacc cgcagcccc acccaagatg gcctgggtctg tgggggtgtg 850
cgggcagtgc ctcggttgct tctgcggctc cttagggcag aacagctgca 900
tgtggcactt gtgacactca ctcacccttc aggggaggtc tgggggcctc 950
tcctccggca cggggccctg gctgcagaga ccttcagtgc catcctgact 1000
ctagaaggcc cccacagca gggcgtaggg ggcacaccc tgctcactct 1050

09943634-033001

gaccggagct	ggcgggcagc	gggtacgcgg	tggcaccccg	ttgtgcccc	2550
ctttggctta	attaagtgtg	ctgtctgcac	ctgcaagggg	ggcactggag	2600
aggtgcactg	tgagaagggtg	cagtgtcccc	ggctggcctg	tgcccagcct	2650
gtgcgtgtca	acccacaccga	ctgctgcaaa	cagtgtccag	tggggtcggg	2700
ggcccccccc	cagctggggg	accccatgca	ggctgatggg	ccccggggct	2750
gccgttttgc	tgggcagtgg	ttcccagaga	gtcagagctg	gcacccctca	2800
gtgccccctt	ttggagagat	gagctgtatc	acctgcagat	gtggggcagg	2850
ggtgcctcac	tgtgagcggg	atgactgttc	actgccactg	tcctgtggct	2900
cggggaagga	gagtcgatgc	tgttcccgtc	gcacggccca	ccggcggccc	2950
ccagagacca	gaactgatcc	agagctggag	aaagaagccg	aaggctctta	3000
gggagcagcc	agagggccaa	gtgaccaaga	ggatggggcc	tgagctgggg	3050
aaggggtggc	atcgaggacc	ttcttgcatc	ctcctgtggg	aagcccagtg	3100
cctttgctcc	tctgtcctgc	ctctactccc	acccccacta	cctctgggaa	3150
ccacagctcc	acaaggggga	gaggcagctg	ggccagaccg	aggtcacagc	3200
cactccaagt	cctgccctgc	cacctcggc	ctctgtcctg	gaagccccac	3250
ccctttcctc	ctgtacataa	tgtcactggc	ttgttgggat	ttttaattta	3300
tcttcaactca	gcaccaaggg	ccccgcacac	tccactcctg	ctgcccctga	3350
gctgagcaga	gtcattattg	gagagttttg	tattttattaa	aacattttctt	3400
tttcagtcaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	a	3441

<210> 7

<400> 7

0944664-033001

Arg Cys Val Leu Cys Ala Cys Glu Ala Pro Gln Trp Gly Arg Arg	80	85	90
Thr Arg Gly Pro Gly Arg Val Ser Cys Lys Asn Ile Lys Pro Glu	95	100	105
Cys Pro Thr Pro Ala Cys Gly Gln Pro Arg Gln Leu Pro Gly His	110	115	120
Cys Cys Gln Thr Cys Pro Gln Glu Arg Ser Ser Ser Glu Arg Gln	125	130	135
Pro Ser Gly Leu Ser Phe Glu Tyr Pro Arg Asp Pro Glu His Arg	140	145	150
Ser Tyr Ser Asp Arg Gly Glu Pro Gly Ala Glu Glu Arg Ala Arg	155	160	165
Gly Asp Gly His Thr Asp Phe Val Ala Leu Leu Thr Gly Pro Arg	170	175	180
Ser Gln Ala Val Ala Arg Ala Arg Val Ser Leu Leu Arg Ser Ser	185	190	195
Leu Arg Phe Ser Ile Ser Tyr Arg Arg Leu Asp Arg Pro Thr Arg	200	205	210
Ile Arg Phe Ser Asp Ser Asn Gly Ser Val Leu Phe Glu His Pro	215	220	225
Ala Ala Pro Thr Gln Asp Gly Leu Val Cys Gly Val Trp Arg Ala	230	235	240
Val Pro Arg Leu Ser Leu Arg Leu Leu Arg Ala Glu Gln Leu His	245	250	255
Val Ala Leu Val Thr Leu Thr His Pro Ser Gly Glu Val Trp Gly	260	265	270
Pro Leu Ile Arg His Arg Ala Leu Ala Ala Glu Thr Phe Ser Ala	275	280	285
Ile Leu Thr Leu Glu Gly Pro Pro Gln Gln Gly Val Gly Gly Ile	290	295	300
Thr Leu Leu Thr Leu Ser Asp Thr Glu Asp Ser Leu His Phe Leu	305	310	315
Leu Leu Phe Arg Gly Leu Leu Glu Pro Arg Ser Gly Gly Leu Thr	320	325	330
Gln Val Pro Leu Arg Leu Gln Ile Leu His Gln Gly Gln Leu Leu	335	340	345
Arg Glu Leu Gln Ala Asn Val Ser Ala Gln Glu Pro Gly Phe Ala	350	355	360
Glu Val Leu Pro Asn Leu Thr Val Gln Glu Met Asp Trp Leu Val			

00943664-083001

Ala Gly Ala Glu Gly Val Arg Ala Leu Gly Ala Pro Asp Thr Ala	665	670	675
Ser Ala Ala Pro Pro Val Val Pro Gly Leu Pro Ala Leu Ala Pro	680	685	690
Ala Lys Pro Gly Gly Pro Gly Arg Pro Arg Asp Pro Asn Thr Cys	695	700	705
Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp Ala Pro	710	715	720
Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg Arg Thr	725	730	735
Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His	740	745	750
Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys	755	760	765
Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro	770	775	780
Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala	785	790	795
Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys	800	805	810
Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys	815	820	825
Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg	830	835	840
Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly	845	850	855
Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg	860	865	870
Gly Cys Arg Phe Ala Gly Gln Trp Phe Pro Glu Ser Gln Ser Trp	875	880	885
His Pro Ser Val Pro Pro Phe Gly Glu Met Ser Cys Ile Thr Cys	890	895	900
Arg Cys Gly Ala Gly Val Pro His Cys Glu Arg Asp Asp Cys Ser	905	910	915
Leu Pro Leu Ser Cys Gly Ser Gly Lys Glu Ser Arg Cys Cys Ser	920	925	930
Arg Cys Thr Ala His Arg Arg Pro Pro Glu Thr Arg Thr Asp Pro	935	940	945
Glu Leu Glu Lys Glu Ala Glu Gly Ser			

<210> 8
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide probe

<400> 8
 gactagttct agatcgcgag cggccgccct tttttttttt tttt 44

<210> 9
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 9
 cggacgcgtg gggcctgcgc acccagct 28

<210> 10
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 gccgctcccc gaacgggcag cggctccttc tcagaa 36

<210> 11
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ggcgcacagc acgcagcgca tcaccccgaa tggctc 36

<210> 12
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 12
 gtgctgccca tccgttctga gaagga 26

<210> 13

TOOEBO"49EH660

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 13
gcagggtgct caaacaggac ac 22

<210> 14
<211> 3231
<212> DNA
<213> Homo Sapien

<400> 14
ggcggagcag ccctagccgc caccgtcgct ctgcagctc tcgtcgccac 50
tgccaccgcc gccgccgtca ctgcgtcctg gctccggctc ccgcgccctc 100
ccggccggcc atgcagcccc gccgcgccc gccgcccgt gcgcagctgc 150
tgcccgcgt ggccctgctg ctgctgctgc tcggagcggg gccccgaggc 200
agtcacctgg ccaaccgggt gcccgccgcg cccttgctg cgccccggcc 250
gtgcgccgcg cagccctgcc ggaatggggg tgtgtgcacc tcgcgcctg 300
agccggaccc gcagcacccg gccccgcgcg gcgagcctgg ctacagctgc 350
acctgccccg ccgggatctc cggcgccaac tgccagcttg ttgcagatcc 400
ttgtgccagc aacccttgtc accatggcaa ctgcagcagc agcagcagca 450
gcagcagcga tggtacctc tgcatttgca atgaaggcta tgaaggctcc 500
aactgtgaac aggcacttcc cagtctccca gccactggct ggaccgaatc 550
catggcacc cgacagcttc agcctgttcc tgctactcag gacccagaca 600
aaatcctgcc tcgtctcag gcaacgggtga cactgcctac ctggcagccg 650
aaaacagggc agaaagtgt agaaatgaaa tgggatcaag tggaggtgat 700
cccagatatt gcctgtggga atgccagttc taacagctct gcgggtggcc 750
gcctggtatc ctttgaagtg ccacagaaca cctcagtcaa gattcggcaa 800
gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850
ccaacagtgc tccctcatag atggacgaag tgtgaccccc cttcaggctt 900
cagggggact ggtcctcctg gaggagatgc tcgccttggg gaataatcac 950
tttattggtt ttgtgaatga ttctgtgact aagtctattg tggctttgcg 1000
cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

094364-03001

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100
gaggcaactt tttcctgtac ctgtgaggag cagtacgtgg gtactttctg 1150
tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200
gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250
cttctggtt atactggaga gctttgccag tccaagattg attactgcat 1300
cctagacca tgcagaaatg gagcaacatg catttccagt ctgagtggat 1350
tcacctgcca gtgtccagaa ggatacttcg gatctgcttg tgaagaaaag 1400
gtggacccct gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450
ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500
cctgtgccc gcttattgac ttctgtgccc tcagcccctg tgctcatggc 1550
acgtgccga gcgtgggcac cagctacaaa tgcctctgtg atccaggta 1600
ccatggcctc tactgtgagg aggaatataa tgagtgcctc tccgctccat 1650
gcctgaatgc agccacctgc agggacctcg ttaatggcta tgagtgtgtg 1700
tgctggcag aatacaaagg aacacactgt gaattgtaca aggatccctg 1750
cgctaacgtc agctgtctga acggagccac ctgtgacagc gacggcctga 1800
atggcacgtg catctgtgca cccgggttta cagggaaga gtgcgacatt 1850
gacataaatg aatgtgacag taaccctgc caccatgggtg ggagctgcct 1900
ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950
caaactgtga gatccacctc caatggaagt cccggcacat ggcggagagc 2000
ctcaccaaca tgccacggca ctccctctac atcatcattg gagccctctg 2050
cgtggccttc atccttatgc tgatcctcct gatcgtgggg atttgccga 2100
tcagccgcct tgaataccag ggttcttcca ggccagccta tgaggagttc 2150
tacaactgcc gcagcatcga cagcgagtgc agcaatgcca ttgcatccat 2200
ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250
gccccatcgc ctatgaagat tacagtccctg atgacaaacc cttggtcaca 2300
ctgattaaaa ctaaagattt gtaatctttt tttggattat ttttcaaaaa 2350
gatgagatac tacactcatt taaatatttt taagaaaata aaaagcttaa 2400
gaaatttaaa atgctagctg ctcaagagtt ttcagtagaa tatttaagaa 2450
ctaattttct gcagctttta gtttgaaaaa aatattttta aaacaaaatt 2500

tgtgaaacct atagacgatg ttttaatgta ccttcagctc tctaaactgt 2550
gtgcttctac tagtgtgtgc tcttttcact gtagacacta tcacgagacc 2600
cagattaatt tctgtggttg ttacagaata agtctaataca aggagaagtt 2650
tctgtttgac gtttgagtgc cggctttctg agtagagtta ggaaaaccac 2700
gtaacgtagc atatgatgta taatagagta tacccgttac ttaaaaagaa 2750
gtctgaaatg ttcgttttgt ggaaaagaaa ctagttaaata ttactattcc 2800
taaccggaat gaaattagcc tttgccttat tctgtgcatg ggtaagtaac 2850
ttattttctgc actgttttgt tgaactttgt ggaaacattc tttcgagttt 2900
gtttttgtca ttttcgtaac agtcgtcgaa ctaggectca aaaacatacg 2950
taacgaaaag gcctagcgag gcaaattctg attgatttga atctatattt 3000
ttcttttaaaa agtcaagggt tctatattgt gagtaaatta aatttacatt 3050
tgagttgttt gttgctaaga ggtagtaaat gtaagagagt actggttcct 3100
tcagtagtga gtattttctca tagtgcagct ttatttatct ccaggatggt 3150
tttgtggctg tatttgattg atatgtgctt cttctgattc ttgctaattt 3200
ccaaccatat tgaataaatg tgatcaagtc a 3231

```
<210> 15
<211> 737
<212> PRT
<213> Homo Sapien
```


004364-083001

110										115					120				
Cys	Ile	Cys	Asn	Glu	Gly	Tyr	Glu	Gly	Pro	Asn	Cys	Glu	Gln	Ala					
				125					130					135					
Leu	Pro	Ser	Leu	Pro	Ala	Thr	Gly	Trp	Thr	Glu	Ser	Met	Ala	Pro					
				140					145					150					
Arg	Gln	Leu	Gln	Pro	Val	Pro	Ala	Thr	Gln	Glu	Pro	Asp	Lys	Ile					
				155					160					165					
Leu	Pro	Arg	Ser	Gln	Ala	Thr	Val	Thr	Leu	Pro	Thr	Trp	Gln	Pro					
				170					175					180					
Lys	Thr	Gly	Gln	Lys	Val	Val	Glu	Met	Lys	Trp	Asp	Gln	Val	Glu					
				185					190					195					
Val	Ile	Pro	Asp	Ile	Ala	Cys	Gly	Asn	Ala	Ser	Ser	Asn	Ser	Ser					
				200					205					210					
Ala	Gly	Gly	Arg	Leu	Val	Ser	Phe	Glu	Val	Pro	Gln	Asn	Thr	Ser					
				215					220					225					
Val	Lys	Ile	Arg	Gln	Asp	Ala	Thr	Ala	Ser	Leu	Ile	Leu	Leu	Trp					
				230					235					240					
Lys	Val	Thr	Ala	Thr	Gly	Phe	Gln	Gln	Cys	Ser	Leu	Ile	Asp	Gly					
				245					250					255					
Arg	Ser	Val	Thr	Pro	Leu	Gln	Ala	Ser	Gly	Gly	Leu	Val	Leu	Leu					
				260					265					270					
Glu	Glu	Met	Leu	Ala	Leu	Gly	Asn	Asn	His	Phe	Ile	Gly	Phe	Val					
				275					280					285					
Asn	Asp	Ser	Val	Thr	Lys	Ser	Ile	Val	Ala	Leu	Arg	Leu	Thr	Leu					
				290					295					300					
Val	Val	Lys	Val	Ser	Thr	Cys	Val	Pro	Gly	Glu	Ser	His	Ala	Asn					
				305					310					315					
Asp	Leu	Glu	Cys	Ser	Gly	Lys	Gly	Lys	Cys	Thr	Thr	Lys	Pro	Ser					
				320					325					330					
Glu	Ala	Thr	Phe	Ser	Cys	Thr	Cys	Glu	Glu	Gln	Tyr	Val	Gly	Thr					
				335					340					345					
Phe	Cys	Glu	Glu	Tyr	Asp	Ala	Cys	Gln	Arg	Lys	Pro	Cys	Gln	Asn					
				350					355					360					
Asn	Ala	Ser	Cys	Ile	Asp	Ala	Asn	Glu	Lys	Gln	Asp	Gly	Ser	Asn					
				365					370					375					
Phe	Thr	Cys	Val	Cys	Leu	Pro	Gly	Tyr	Thr	Gly	Glu	Leu	Cys	Gln					
				380					385					390					
Ser	Lys	Ile	Asp	Tyr	Cys	Ile	Leu	Asp	Pro	Cys	Arg	Asn	Gly	Ala					
				395					400					405					

Thr	Cys	Ile	Ser	Ser	Leu	Ser	Gly	Phe	Thr	Cys	Gln	Cys	Pro	Glu
				410					415					420
Gly	Tyr	Phe	Gly	Ser	Ala	Cys	Glu	Glu	Lys	Val	Asp	Pro	Cys	Ala
				425					430					435
Ser	Ser	Pro	Cys	Gln	Asn	Asn	Gly	Thr	Cys	Tyr	Val	Asp	Gly	Val
				440					445					450
His	Phe	Thr	Cys	Asn	Cys	Ser	Pro	Gly	Phe	Thr	Gly	Pro	Thr	Cys
				455					460					465
Ala	Gln	Leu	Ile	Asp	Phe	Cys	Ala	Leu	Ser	Pro	Cys	Ala	His	Gly
				470					475					480
Thr	Cys	Arg	Ser	Val	Gly	Thr	Ser	Tyr	Lys	Cys	Leu	Cys	Asp	Pro
				485					490					495
Gly	Tyr	His	Gly	Leu	Tyr	Cys	Glu	Glu	Glu	Tyr	Asn	Glu	Cys	Leu
				500					505					510
Ser	Ala	Pro	Cys	Leu	Asn	Ala	Ala	Thr	Cys	Arg	Asp	Leu	Val	Asn
				515					520					525
Gly	Tyr	Glu	Cys	Val	Cys	Leu	Ala	Glu	Tyr	Lys	Gly	Thr	His	Cys
				530					535					540
Glu	Leu	Tyr	Lys	Asp	Pro	Cys	Ala	Asn	Val	Ser	Cys	Leu	Asn	Gly
				545					550					555
Ala	Thr	Cys	Asp	Ser	Asp	Gly	Leu	Asn	Gly	Thr	Cys	Ile	Cys	Ala
				560					565					570
Pro	Gly	Phe	Thr	Gly	Glu	Glu	Cys	Asp	Ile	Asp	Ile	Asn	Glu	Cys
				575					580					585
Asp	Ser	Asn	Pro	Cys	His	His	Gly	Gly	Ser	Cys	Leu	Asp	Gln	Pro
				590					595					600
Asn	Gly	Tyr	Asn	Cys	His	Cys	Pro	His	Gly	Trp	Val	Gly	Ala	Asn
				605					610					615
Cys	Glu	Ile	His	Leu	Gln	Trp	Lys	Ser	Gly	His	Met	Ala	Glu	Ser
				620					625					630
Leu	Thr	Asn	Met	Pro	Arg	His	Ser	Leu	Tyr	Ile	Ile	Ile	Gly	Ala
				635					640					645
Leu	Cys	Val	Ala	Phe	Ile	Leu	Met	Leu	Ile	Ile	Leu	Ile	Val	Gly
				650					655					660
Ile	Cys	Arg	Ile	Ser	Arg	Ile	Glu	Tyr	Gln	Gly	Ser	Ser	Arg	Pro
				665					670					675
Ala	Tyr	Glu	Glu	Phe	Tyr	Asn	Cys	Arg	Ser	Ile	Asp	Ser	Glu	Phe
				680					685					690
Ser	Asn	Ala	Ile	Ala	Ser	Ile	Arg	His	Ala	Arg	Phe	Gly	Lys	Lys

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
725 730 735

Asp Leu

```
<210> 16
<211> 43
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic Oligonucleotide Probe

```
<400> 16
tqtaaaacga cggccagtta aatagacctg caattattaa tct 43
```

```
<210> 17
<211> 41
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic Oligonucleotide Probe

<400> 17
caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

```
<210> 18
<211> 508
<212> DNA
<213> Homo Sapien
```

```
<400> 18
ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50
acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100
aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggggaagggt 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
```

taggggag 508

<210> 19
<211> 508
<212> DNA
<213> Homo Sapien

<400> 19
ctctggaagg tcacggccac aggattccaa cagtgtccc tcatagatgg 50
acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100
aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaagg 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
taggggag 508

<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 20
ctctggaagg tcacggccac agg 23

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 21
ctcagttcgg ttggcaaagc tctc 24

<210> 22
<211> 69
<212> DNA
<213> Artificial Sequence

<220>

SECRET

gctttgccaa ccgaactga 69

<213> Homo Sapien

agcttcaggg tgctcttcgt ggaaacctgc tgcgggtctt cagacaagtg 1150

gaaaaggtac	aggaagaaaa	caaattggcaa	agccccttgg	aggacaagtt	1200
cccggatgag	cagctgagca	gttcctgcca	ctccgacctc	tcacgtctgc	1250
gtcagagaca	gagttctgact	tcaggccagg	aactcactga	gattcccata	1300
cactggacag	ccaagttacc	agccaagtgg	tcagtctcag	agtccctccc	1350
ccacatggcc	ccagtccttg	cagttgtggc	caccttccca	gtccttattc	1400
tgtggctctg	atgaccagtt	tagtcctgcc	agatgtcact	gtagcaagcc	1450
acagacaccc	cacaaagttc	ccctgttggtg	caggcacaaa	tatttctctga	1500
aataaatggt	ttggacatag				1520

```
<210> 24
<211> 433
<212> PRT
<213> Homo Sapien
```

<400> 24															
Met	Pro	Gly	Thr	Tyr	Ala	Pro	Ser	Thr	Thr	Leu	Ser	Ser	Pro	Ser	
1				5					10					15	
Thr	Gln	Gly	Leu	Gln	Glu	Gln	Ala	Arg	Ala	Leu	Met	Arg	Asp	Phe	
				20					25					30	
Pro	Leu	Val	Asp	Gly	His	Asn	Asp	Leu	Pro	Leu	Val	Leu	Arg	Gln	
				35					40					45	
Val	Tyr	Gln	Lys	Gly	Leu	Gln	Asp	Val	Asn	Leu	Arg	Asn	Phe	Ser	
				50					55					60	
Tyr	Gly	Gln	Thr	Ser	Leu	Asp	Arg	Leu	Arg	Asp	Gly	Leu	Val	Gly	
				65					70					75	
Ala	Gln	Phe	Trp	Ser	Ala	Tyr	Val	Pro	Cys	Gln	Thr	Gln	Asp	Arg	
				80					85					90	
Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg	
				95					100					105	
Met	Cys	Ala	Ser	Tyr	Ser	Glu	Leu	Glu	Leu	Val	Thr	Ser	Ala	Lys	
				110					115					120	
Ala	Leu	Asn	Asp	Thr	Gln	Lys	Leu	Ala	Cys	Leu	Ile	Gly	Val	Glu	
				125					130					135	
Gly	Gly	His	Ser	Leu	Asp	Asn	Ser	Leu	Ser	Ile	Leu	Arg	Thr	Phe	
				140					145					150	
Tyr	Met	Leu	Gly	Val	Arg	Tyr	Leu	Thr	Leu	Thr	His	Thr	Cys	Asn	
				155					160					165	
Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr	
				170					175					180	

Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala	185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val	215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg	230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly	245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro	260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys	275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp	290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr	305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu	320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg	335	340	345
Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu	350	355	360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser	365	370	375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln	380	385	390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala	395	400	405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Met Ala Pro Val Leu	410	415	420
Ala Val Val Ala Thr Phe Pro Val Leu Ile Leu Trp Leu	425	430	

<210> 25
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 25
agttctgggc agcctatgtg cc 22

<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatgggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat cccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gagcagattg acctcatagc ccgcatgtgt gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

<400> 29
aaaacctata aatattccgg attattcata ccgtcccacc atcggggcgcg 50
gatccgcggc cgcgaattct aaaccaacat gccgggcacc tacgctccct 100
cgaccacact cagtagtccc agcaccacagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgccct 200
ggtcctaagg caggtttacc agaaagggct acaggatgtt aacctgcgca 250
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300
ggcgcccagt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350
tgcctgcgc ctcaccctgg agcagattga cctcatagc ccgcatgtgtg 400

TOOEBO"499E4660

00943664.083001

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450
 actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgctgga 500
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550
 tgacgctcac ccacacctgc aacacaccct gggcagagag ctccgctaag 600
 ggcgtccact ccttctacaa caacatcagc gggctgactg actttggtga 650
 gaagggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700
 atgtctcaga tgctgtggca cggcggggccc tggaagtgtc acaggcacct 750
 gtgatcttct cccactcggc tgcccgggggt gtgtgcaaca gtgctcggaa 800
 tgttcctgat gacatcctgc agcttctgaa gaagaacggt ggcgtcgtga 850
 tgggtgtcttt gtccatggga gtaatacagt gcaaccatc agccaatgtg 900
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatccaa 950
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000
 ggctggaaga cgtgtccaca tacccggtcc tgatagagga gttgctgagt 1050
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100
 gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150
 gccccttgga ggacaagttc ccgatgagc agctgagcag ttcctgccac 1200
 tccgacctct cacgtctgcg tcagagacag agtctgactt caggccagga 1250
 actcactgag attcccatac actggacagc caagttacca gccaaagtgg 1300
 cagtctcaga gtctctcccc caccctgaca aaactcacac atgcccaccg 1350
 tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccc 1400
 aaaacccaag gacacc 1416

<210> 30
 <211> 446
 <212> PRT
 <213> Homo Sapien

<400> 30
 Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
 1 5 10 15
 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
 20 25 30
 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
 35 40 45
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

50

55

60

Tyr	Gly	Gln	Thr	Ser	Leu	Asp	Arg	Leu	Arg	Asp	Gly	Leu	Val	Gly	
				65					70					75	
Ala	Gln	Phe	Trp	Ser	Ala	Tyr	Val	Pro	Cys	Gln	Thr	Gln	Asp	Arg	
				80					85					90	
Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg	
				95					100					105	
Met	Cys	Ala	Ser	Tyr	Ser	Glu	Leu	Glu	Leu	Val	Thr	Ser	Ala	Lys	
				110					115					120	
Ala	Leu	Asn	Asp	Thr	Gln	Lys	Leu	Ala	Cys	Leu	Ile	Gly	Val	Glu	
				125					130					135	
Gly	Gly	His	Ser	Leu	Asp	Asn	Ser	Leu	Ser	Ile	Leu	Arg	Thr	Phe	
				140					145					150	
Tyr	Met	Leu	Gly	Val	Arg	Tyr	Leu	Thr	Leu	Thr	His	Thr	Cys	Asn	
				155					160					165	
Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr	
				170					175					180	
Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala	
				185					190					195	
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser	
				200					205					210	
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val	
				215					220					225	
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg	
				230					235					240	
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly	
				245					250					255	
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro	
				260					265					270	
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys	
				275					280					285	
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp	
				290					295					300	
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr	
				305					310					315	
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu	
				320					325					330	
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg	
				335					340					345	

SECRET

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu
 350 355 360
 Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser
 365 370 375
 Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln
 380 385 390
 Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala
 395 400 405
 Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His
 410 415 420
 Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
 425 430 435
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 440 445

<210> 31
 <211> 1790
 <212> DNA
 <213> Homo Sapien

<400> 31
 cgcccagcga cgtgcgggcg gcctggcccg cgccctcccg cgcccggcct 50
 gcgtcccgcg ccctgcgcca ccgcccgcga gccgcagccc gccgcgcgcc 100
 cccggcagcg ccggccccat gcccgccggc cgccggggcc ccgcgcacca 150
 atccgcgcgg cgccgcgcgc cgttgctgcc cctgctgctg ctgctctgcg 200
 tcctcggggc gccgcgagcc ggatcaggag cccacacagc tgtgatcagt 250
 ccccaggatc ccacgtttct catcggtccc tcctgctgg ccacctgctc 300
 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggacct 350
 tcaacgggcg ccgcctgccc cctgagctct cccgtgtact caacgcctcc 400
 accttggtc tggccctggc caacctcaat ggggccaggc agcggtcggg 450
 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500
 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggcccacgg 600
 ggagaccttc ctccacacca actactccct caagtacaag cttaggtggg 650
 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700
 tgccacatcc ccaaggacct ggctctcttt acgccctatg agatctgggt 750
 ggaggccacc aaccgcctgg gctctgcccg ctccgatgta ctcacgctgg 800

atatcctgga tgtggtgacc acggaccccc cgcccgaagt gcacgtgagc 850
cgcgctcgggg gcctggagga ccagctgagc gtgcgctggg tgctgccacc 900
cgccctcaag gatttctctt ttcaagccaa ataccagatc cgctaccgag 950
tggaggacag tgtggactgg aaggtggtgg acgatgtgag caaccagacc 1000
tcctgccgcc tggccggcct gaaacccggc accgtgtact tcgtgcaagt 1050
gcgctgcaac ccctttggca tctatggctc caagaaagcc gggatctgga 1100
gtgagtggag ccacccaca gccgcctcca ctccccgcag tgagcgcccg 1150
ggcccgggcg gcggggcggtg cgaaccgcgg ggcggagagc cgagctcggg 1200
gccggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250
cgtactgctc caacctcagc ttccgcctct acgaccagtg gcgagcctgg 1300
atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgccctc 1350
gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400
aggccaccct ccctgccacg tggagacgca gaggccgaac ccaaactggg 1450
gccacctctg taccctcact tcagggcacc tgagccaccc tcagcaggag 1500
ctggggtggc ccctgagctc caacggccat aacagctctg actcccacgt 1550
gaggccacct ttgggtgcac cccagtgggt gtgtgtgtgt gtgtgaggg 1600
tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650
cattactccc cattacctag ggcccctcca aaagagtcct tttaaataaa 1700
tgagctatth aggtgctgtg attgtgaaaa aaaaaaaaaa aaaaaaaaaa 1750
aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

```
<210> 32
<211> 422
<212> PRT
<213> Homo Sapien
```

```
<400> 32
Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg
      1             5             10             15
```

Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro
35 40 45

Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys
50 55 60

05943664-083001
FOOEBQ-49E4650

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr	65	70	75
Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val	80	85	90
Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly	95	100	105
Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp	110	115	120
Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro	125	130	135
Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp	140	145	150
Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu	155	160	165
His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln	170	175	180
Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys	185	190	195
His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp	200	205	210
Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu	215	220	225
Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp	230	235	240
Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val	245	250	255
Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala	260	265	270
Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys	275	280	285
Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly	290	295	300
Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro	305	310	315
Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp	320	325	330
Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly	335	340	345
Pro Gly Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser			

350	355	360
Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys		
365	370	375
Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln		
380	385	390
Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp		
395	400	405
Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro		
410	415	420
Ala Arg		

<210> 33
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 33
 cccgcccgcacgtga gcc 23

<210> 34
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgagccagcc caggaactgc ttg 23

<210> 35
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 35
 caagtgcgct gcaacccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36
 <211> 1771
 <212> DNA
 <213> Homo Sapien

<400> 36
 cccacgcgtc cgctggtggt agatcgagca accctctaaa agcagtttag 50

094364-083001

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgcagc cacaaaaggg 100
atgaaatttc ttctggacat cctcctgctt ctcccgttac tgatcgtctg 150
ctccctagag tccttcgtga agctttttat tcctaagagg agaaaatcag 200
tcaccggcga aatcgtgctg attacaggag ctgggcatgg aattgggaga 250
ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350
gtgccaaagg tcataccttt gtggtagact gcagcaaccg agaagatatt 400
tacagctctg caaagaagg gtgagcagaa attggagatg ttagtatttt 450
agtaaataat gctgggtgtag tctatacatc agatttgttt gctacacaag 500
atcctcagat tgaaaagact tttgaagtta atgtacttgc acatttctgg 550
actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600
tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg 650
cttactgttc aagcaagttt gctgctggtg gatttcataa aactttgaca 700
gatgaactgg ctgccttaca aataactgga gtcaaaacaa catgtctgtg 750
tcctaatttc gtaaacactg gcttcatcaa aaatccaagt acaagtttgg 800
gaccactct ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850
ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900
aacattggaa aggatccttc ctgagcgttt cctggcagtt ttaaaacgaa 950
aaatcagtgt taagtttgat gcagttattg gatataaaat gaaagcgcaa 1000
taagcaccta gttttctgaa aactgattta ccaggtttag gttgatgtca 1050
tctaattagt ccagaatttt aatgtttgaa cttctgtttt ttctaattat 1100
ccccatttct tcaatatcat ttttgaggct ttggcagtct tcatttacta 1150
ccacttggtc tttagccaaa agctgattac atatgatata aacagagaaa 1200
tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaaatgac 1250
tttattaaaa taatttccaa gattatttgt ggctcacctg aaggctttgc 1300
aaaatttgta ccataaccgt ttatttaaca tatattttta tttttgattg 1350
cacttaaatt ttgtataatt tgtgtttctt tttctgttct acataaaatc 1400
agaaacttca agctctctaa ataaaatgaa ggactatatc tagtggtatt 1450
tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctacccatt 1500

gccactctgt ttctgagag atacctcaca ttccaatgcc aaacatttct 1550
 gcacagggaa gctagaggtg gatacacgtg ttgcaagtat aaaagcatca 1600
 ctgggattta aggagaattg agagaatgta cccacaaatg gcagcaataa 1650
 taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750
 aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37
 <211> 300
 <212> PRT
 <213> Homo Sapien

<400> 37
 Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Leu Pro Leu Leu Ile
 1 5 10 15
 Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg
 20 25 30
 Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
 35 40 45
 His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys
 50 55 60
 Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu
 65 70 75
 Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe
 80 85 90
 Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys
 95 100 105
 Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn
 110 115 120
 Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro
 125 130 135
 Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp
 140 145 150
 Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
 155 160 165
 His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro
 170 175 180
 Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe
 185 190 195
 His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

05043664-083001

200										205				210			
Val	Lys	Thr	Thr	Cys	Leu	Cys	Pro	Asn	Phe	Val	Asn	Thr	Gly	Phe			
				215					220					225			
Ile	Lys	Asn	Pro	Ser	Thr	Ser	Leu	Gly	Pro	Thr	Leu	Glu	Pro	Glu			
				230					235					240			
Glu	Val	Val	Asn	Arg	Leu	Met	His	Gly	Ile	Leu	Thr	Glu	Gln	Lys			
				245					250					255			
Met	Ile	Phe	Ile	Pro	Ser	Ser	Ile	Ala	Phe	Leu	Thr	Thr	Leu	Glu			
				260					265					270			
Arg	Ile	Leu	Pro	Glu	Arg	Phe	Leu	Ala	Val	Leu	Lys	Arg	Lys	Ile			
				275					280					285			
Ser	Val	Lys	Phe	Asp	Ala	Val	Ile	Gly	Tyr	Lys	Met	Lys	Ala	Gln			
				290					295					300			

<210> 38

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

ggtgaaggca gaaattggag atg 23

<210> 39

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 39

atcccatgca tcagcctggt tacc 24

<210> 40

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

gctgggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41

<211> 1377

<212> DNA

<213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50
gaaccaggac tggggtgacg gcagggcagg gggcgccctgg ccggggagaa 100
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggaccccg 200
gcgtccgggc tcccgggtgcc agcgctatga ggccactcct cgtcctgctg 250
ctcctggggc tggcgcccg ctcgccccca ctggacgaca acaagatccc 300
cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500
ccgggcctgc cggggagtgc tcggtgctc cgcgatccgc cttcagcgcc 550
aagcgctccg agagccgggt gcctccgccg tctgacgcac ccttgccctt 600
cgaccgcgtg ctggtgaacg agcagggaca ttacgacgcc gtcaccggca 650
agttcacctg ccagggtgcct ggggtctact acttcgccgt ccatgccacc 700
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750
tgctctttt ttccagtttt tcggggggtg gcccagcca gcctcgctct 800
cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900
caccttctcc ggatttctg tgtactccga ctggcacagc tccccagtct 950
ttgcttagtg cccactgcaa agtgagctca tgctctcact cctagaagga 1000
gggtgtgagg ctgacaacca ggtcatccag gagggtggc cccctggaa 1050
tattgtgaat gactagggag gtggggtaga gcactctccg tcctgtgct 1100
ggcaaggaat gggaacagtg gctgtctgcg atcaggtctg gcagcatggg 1150
gcagtggctg gatttctgcc caagaccaga ggagtgtgct gtgctggcaa 1200
gtgtaagtcc ccagttgct ctgggtccagg agcccacggg ggggtgctct 1250
cttcctggtc ctctgcttct ctggatcctc cccacccct cctgctctg 1300
gggccggccc ttttctcaga gatcaactcaa taaacctaa aaccctcata 1350
aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243
 <212> PRT
 <213> Homo Sapien

<400> 42

Met	Arg	Pro	Leu	Leu	Val	Leu	Leu	Leu	Gly	Leu	Ala	Ala	Gly	
1				5				10					15	
Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly
				20				25					30	
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly
				35				40					45	
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly
				50				55					60	
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly
				65				70					75	
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly
				80				85					90	
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala
				95				100					105	
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp
				110				115					120	
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His
				125				130					135	
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val
				140				145					150	
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln
				155				160					165	
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln
				170				175					180	
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala
				185				190					195	
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly
				200				205					210	
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser
				215				220					225	
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro
				230				235					240	
Val	Phe	Ala												

<210> 43
 <211> 24

[illegible]

```
<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

<400> 48
ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49
<211> 1876
<212> DNA
<213> Homo Sapien

<400> 49
ctcttttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50
atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100
acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150
gggggcatct cctggctgtg ctctggccc tcttggcac cacctgggca 200
gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250
gaacaggaag gagagtttct tgctcctctc cctgcacaac cgctgcgca 300
gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtgc 350
agcctggccc aactggctca agccaggga gccctctgtg gaatcccaac 400
cccagacctg gcatcgggc tgtggcgcac cctgcaagtg ggctggaaca 450
tgcagctgct gcccgcgggc ttggcgtcct ttgttgaagt ggtcagccta 500
tggtttgcag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550
caacgccacc tgcaccact acacgcagct cgtgtgggcc acctcaagcc 600
agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650
gcctttgtct gtgcctactc ccccgaggc aactgggagg tcaacgggaa 700
gacaatcatc cctataaga aggggtgctg gtgttcgctc tgcacagcca 750
gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800
gtccccagga atccttgctg catgagctgc cagaaccatg gacgtctcaa 850
catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900
gccaagtgcg gtgcagcctg cagtgtgtgc acggccggtt ccgggaggag 950
gagtgtcgt gcgtctgtga catcggtac gggggagccc agtgtgccac 1000
caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050
gcttcattgt gtcttcagag gcagacacct attacagagc caggatgaaa 1100
tgtcagagga aaggcggggt gctggcccag atcaagagcc agaaagtgc 1150

00943664-033001

ggacatcctc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250
 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300
 cagttttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350
 ctgccatggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400
 aactggaacg accagcgctg caaaaccga aaccgttaca tctgccagtt 1450
 tgcccaggag cacatctccc ggtggggccc agggtcctga ggcctgacca 1500
 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550
 ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750
 acaccgccag tgggtcaaaa aggctgctct cttccacctg gccagaccc 1800
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50
 <211> 455
 <212> PRT
 <213> Homo Sapien

<400> 50
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
 1 5 10 15
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
 20 25 30
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
 35 40 45
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser
 50 55 60
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
 65 70 75
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
 80 85 90
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
 95 100 105
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

00943664-033001

110					115					120				
Val	Glu	Val	Val	Ser 125	Leu	Trp	Phe	Ala	Glu 130	Gly	Gln	Arg	Tyr	Ser 135
His	Ala	Ala	Gly	Glu 140	Cys	Ala	Arg	Asn	Ala 145	Thr	Cys	Thr	His	Tyr 150
Thr	Gln	Leu	Val	Trp 155	Ala	Thr	Ser	Ser	Gln 160	Leu	Gly	Cys	Gly	Arg 165
His	Leu	Cys	Ser	Ala 170	Gly	Gln	Thr	Ala	Ile 175	Glu	Ala	Phe	Val	Cys 180
Ala	Tyr	Ser	Pro	Gly 185	Gly	Asn	Trp	Glu	Val 190	Asn	Gly	Lys	Thr	Ile 195
Ile	Pro	Tyr	Lys	Lys 200	Gly	Ala	Trp	Cys	Ser 205	Leu	Cys	Thr	Ala	Ser 210
Val	Ser	Gly	Cys	Phe 215	Lys	Ala	Trp	Asp	His 220	Ala	Gly	Gly	Leu	Cys 225
Glu	Val	Pro	Arg	Asn 230	Pro	Cys	Arg	Met	Ser 235	Cys	Gln	Asn	His	Gly 240
Arg	Leu	Asn	Ile	Ser 245	Thr	Cys	His	Cys	His 250	Cys	Pro	Pro	Gly	Tyr 255
Thr	Gly	Arg	Tyr	Cys 260	Gln	Val	Arg	Cys	Ser 265	Leu	Gln	Cys	Val	His 270
Gly	Arg	Phe	Arg	Glu 275	Glu	Glu	Cys	Ser	Cys 280	Val	Cys	Asp	Ile	Gly 285
Tyr	Gly	Gly	Ala	Gln 290	Cys	Ala	Thr	Lys	Val 295	His	Phe	Pro	Phe	His 300
Thr	Cys	Asp	Leu	Arg 305	Ile	Asp	Gly	Asp	Cys 310	Phe	Met	Val	Ser	Ser 315
Glu	Ala	Asp	Thr	Tyr 320	Tyr	Arg	Ala	Arg	Met 325	Lys	Cys	Gln	Arg	Lys 330
Gly	Gly	Val	Leu	Ala 335	Gln	Ile	Lys	Ser	Gln 340	Lys	Val	Gln	Asp	Ile 345
Leu	Ala	Phe	Tyr	Leu 350	Gly	Arg	Leu	Glu	Thr 355	Thr	Asn	Glu	Val	Thr 360
Asp	Ser	Asp	Phe	Glu 365	Thr	Arg	Asn	Phe	Trp 370	Ile	Gly	Leu	Thr	Tyr 375
Lys	Thr	Ala	Lys	Asp 380	Ser	Phe	Arg	Trp	Ala 385	Thr	Gly	Glu	His	Gln 390
Ala	Phe	Thr	Ser	Phe 395	Ala	Phe	Gly	Gln	Pro 400	Asp	Asn	His	Gly	Leu 405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420
Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435
Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450
Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaaaggact ccttcgctg ggccacaggg gagcaccagg ccttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cggacgcgtg ggctgggcgc tgcaaagcgt gtcccgccgg gtccccgagc 50
gtcccgccgc ctgccccgc catgctcctg ctgctggggc tgtgcctggg 100
gctgtccctg tgtgtggggc cgcaggaaga ggcgcagagc tggggccact 150
cttcggagca ggatggactc aggggtcccga ggcaagtcag actgttgagc 200

09943664-083001

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctacat 250
catttcccgat tatgccttca ctacgggttc ctgcagaatg ctgaacagag 300
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350
ttcatcacca acttcactat gcttattgga gacaagggtg atcagggcga 400
aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450
ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500
tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550
ggagcttctg cagaggcgcc tgggcaagta cgagcacagc atcagcgtgc 600
ggccccagca gctgtccggg aggctgagcg tggacgtgaa tatectggag 650
agcgcgggca tgcacccct ggaggtgctg ccgcttcaca acagcaggca 700
gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccatctactg 750
tcattaacca aatgaaaca ttgccaaca taatttttaa acctactgta 800
gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850
tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900
atggctatct tgtgcactac ttgctccta aagaccttc tcttttacc 950
aagaatgtgg tattegtgct tgacagcagt gcttctatgg tgggaaccaa 1000
actccggcag accaaggatg cctcttcac aattctccat gacctccgac 1050
cccaggaccg ttctagatc attggatttt ccaaccggat caaagtatgg 1100
aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150
gtacattcac catatgtcac cactggagg cacagacatc aacggggccc 1200
tgcagagggc catcaggctc ctcaacaagt acgtggccca cagtggcatt 1250
ggagaccgga gcggtgacct catcgtcttc ctgacggatg ggaagcccac 1300
ggtcgggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350
cccgaggcca agtctgcac ttaccattg gcatcggcaa cgacgtggac 1400
ttcaggctgc tggagaaact gtcgctggag aactgtggcc tcacacggcg 1450
cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500
aaatcaggac ccgctctc tetgacatcc gcatcgatta tccccccagc 1550
tcagtgtgc aggccaccaa gacctgttc cccaactact tcaacggctc 1600
ggagatcatc attgcgggga agctgggtga caggaagctg gatcacctgc 1650

0094364-083001
T00E80-199E4650

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700
gatgtgcctg tgcggcctca gaaggcaggg aaagatgtca caggaagccc 1750
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800
ggagctacct caccacaaag gagctgctga gctcctggct gcaaagtgac 1850
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900
gagctaccgc ttctcactc ccttcacctc catgaagctg agggggccgg 1950
tcccacgcat ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000
ggacccgaac cggtggtgca gagcgtgca ggagctggca cgcagccagg 2050
acctttgctc aagaagccaa actccgtcaa aaaaaaaca aacaaaaca 2100
aaaaaagaca tgggagagat ggtgtttttc ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcaccttg atcttgacc tccagcctc cagaactgtg 2250
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val
1 5 10 15
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

00043664-033001

Arg Val Lys Glu Lys Arg Asn Lys Thr Thr Glu Glu Asn Gly Glu	125	130	135
Lys Gly Thr Glu Ile Phe Arg Ala Ser Ala Val Ile Pro Ser Lys	140	145	150
Asp Lys Ala Ala Phe Phe Leu Ser Tyr Glu Glu Leu Leu Gln Arg	155	160	165
Arg Leu Gly Lys Tyr Glu His Ser Ile Ser Val Arg Pro Gln Gln	170	175	180
Leu Ser Gly Arg Leu Ser Val Asp Val Asn Ile Leu Glu Ser Ala	185	190	195
Gly Ile Ala Ser Leu Glu Val Leu Pro Leu His Asn Ser Arg Gln	200	205	210
Arg Gly Ser Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser	215	220	225
Thr Val Ile Asn Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys	230	235	240
Pro Thr Val Val Gln Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu	245	250	255
Gly Asp Phe Ile Ile Arg Tyr Asp Val Asn Arg Glu Gln Ser Ile	260	265	270
Gly Asp Ile Gln Val Leu Asn Gly Tyr Phe Val His Tyr Phe Ala	275	280	285
Pro Lys Asp Leu Pro Pro Leu Pro Lys Asn Val Val Phe Val Leu	290	295	300
Asp Ser Ser Ala Ser Met Val Gly Thr Lys Leu Arg Gln Thr Lys	305	310	315
Asp Ala Leu Phe Thr Ile Leu His Asp Leu Arg Pro Gln Asp Arg	320	325	330
Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys Val Trp Lys Asp	335	340	345
His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp Gly Lys Val	350	355	360
Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile Asn Gly	365	370	375
Ala Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala His	380	385	390
Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr	395	400	405
Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu			

410										415					420				
Asn	Asn	Thr	Arg	Glu	Ala	Ala	Arg	Gly	Gln	Val	Cys	Ile	Phe	Thr					
				425					430					435					
Ile	Gly	Ile	Gly	Asn	Asp	Val	Asp	Phe	Arg	Leu	Leu	Glu	Lys	Leu					
				440					445					450					
Ser	Leu	Glu	Asn	Cys	Gly	Leu	Thr	Arg	Arg	Val	His	Glu	Glu	Glu					
				455					460					465					
Asp	Ala	Gly	Ser	Gln	Leu	Ile	Gly	Phe	Tyr	Asp	Glu	Ile	Arg	Thr					
				470					475					480					
Pro	Leu	Leu	Ser	Asp	Ile	Arg	Ile	Asp	Tyr	Pro	Pro	Ser	Ser	Val					
				485					490					495					
Val	Gln	Ala	Thr	Lys	Thr	Leu	Phe	Pro	Asn	Tyr	Phe	Asn	Gly	Ser					
				500					505					510					
Glu	Ile	Ile	Ile	Ala	Gly	Lys	Leu	Val	Asp	Arg	Lys	Leu	Asp	His					
				515					520					525					
Leu	His	Val	Glu	Val	Thr	Ala	Ser	Asn	Ser	Lys	Lys	Phe	Ile	Ile					
				530					535					540					
Leu	Lys	Thr	Asp	Val	Pro	Val	Arg	Pro	Gln	Lys	Ala	Gly	Lys	Asp					
				545					550					555					
Val	Thr	Gly	Ser	Pro	Arg	Pro	Gly	Gly	Asp	Gly	Glu	Gly	Asp	Thr					
				560					565					570					
Asn	His	Ile	Glu	Arg	Leu	Trp	Ser	Tyr	Leu	Thr	Thr	Lys	Glu	Leu					
				575					580					585					
Leu	Ser	Ser	Trp	Leu	Gln	Ser	Asp	Asp	Glu	Pro	Glu	Lys	Glu	Arg					
				590					595					600					
Leu	Arg	Gln	Arg	Ala	Gln	Ala	Leu	Ala	Val	Ser	Tyr	Arg	Phe	Leu					
				605					610					615					
Thr	Pro	Phe	Thr	Ser	Met	Lys	Leu	Arg	Gly	Pro	Val	Pro	Arg	Met					
				620					625					630					
Asp	Gly	Leu	Glu	Glu	Ala	His	Gly	Met	Ser	Ala	Ala	Met	Gly	Pro					
				635					640					645					
Glu	Pro	Val	Val	Gln	Ser	Val	Arg	Gly	Ala	Gly	Thr	Gln	Pro	Gly					
				650					655					660					
Pro	Leu	Leu	Lys	Lys	Pro	Asn	Ser	Val	Lys	Lys	Lys	Gln	Asn	Lys					
				665					670					675					
Thr	Lys	Lys	Arg	His	Gly	Arg	Asp	Gly	Val	Phe	Pro	Leu	His	His					
				680					685					690					
Leu</																			

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cggaacgcgtg ggggtgccga catggcgagt gtagtgctgc cgagcggatc 50
ccagtgtgcg gcggcagcgg cggcggcggc gcctcccggg ctccggcttc 100
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

09943664-083001

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250
ccaacaggca gaccatztat ttccagggaact tcaggccttt gaaggacagc 300
aggtttcagt tgctgaatzt ttctagcagt gaactcaaag tatcattgac 350
aaacgtctca atttctgatg aaggaagata cttttgccag ctctataaccg 400
atcccccaaca ggaaagttac accaccatca cagtcctggt cccaccacgt 450
aatctgatga tcgatatcca gaaagacact gcggtggaag gtgaggagat 500
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550
ggttcaaagg gaacacagag ctaaaaggca aatcggaggt ggaagagtgg 600
tcagacatgt aactgtgac cagtcagctg atgctgaagg tgcacaagga 650
ggacgatggg gtcccagtga tctgccaggt ggagcaccct gcggtcactg 700
gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750
cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800
gcttgagtta acatgtgaag ccacgggaa gcccagcct gtgatggtaa 850
cttgggtgag agtcgatgat gaaatgcctc aacacgccgt actgtctggg 900
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataaccg 950
ctgtgaagct tcaaacatag tggggaaaagc tcaactggat tatatgctgt 1000
atgtatacga tcccccaaca actatccctc ctcccacaac aaccaccacc 1050
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150
gcgtcgtggc ggtggtggtg ttcgccatgc tgtgcttgct catcattctg 1200
gggcgctatt ttgccagaca taaagggtaca tactttcactc atgaagccaa 1250
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300
gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350
ctttttgttt caatgaggtg tccaactggc cctatttaga tgataaagag 1400
acagtgatat tgg 1413

<210> 61
<211> 440
<212> PRT
<213> Homo Sapien

<400> 61
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala
1 5 10 15

Ala	Ala	Ala	Ala	Ala	Pro	Pro	Gly	Leu	Arg	Leu	Leu	Leu	Leu	Leu	Leu	20	25	30
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu		35	40	45
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile		50	55	60
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu		65	70	75
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu		80	85	90
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu		95	100	105
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr		110	115	120
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr		125	130	135
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln		140	145	150
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr		155	160	165
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly		170	175	180
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp		185	190	195
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu		200	205	210
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val		215	220	225
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys		230	235	240
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr		245	250	255
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys		260	265	270
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met		275	280	285
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn		290	295	300
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn				

305	310	315
Ile Val Gly Lys	Ala His Ser Asp Tyr Met	Leu Tyr Val Tyr Asp
320	325	330
Pro Pro Thr Thr	Ile Pro Pro Pro Thr	Thr Thr Thr Thr Thr Thr
335	340	345
Thr Thr Thr Thr	Thr Thr Ile Leu Thr	Ile Ile Thr Asp Ser Arg
350	355	360
Ala Gly Glu Glu	Gly Ser Ile Arg Ala	Val Asp His Ala Val Ile
365	370	375
Gly Gly Val Val	Ala Val Val Val Phe	Ala Met Leu Cys Leu Leu
380	385	390
Ile Ile Leu Gly	Arg Tyr Phe Ala Arg	His Lys Gly Thr Tyr Phe
395	400	405
Thr His Glu Ala	Lys Gly Ala Asp Asp	Ala Ala Asp Ala Asp Thr
410	415	420
Ala Ile Ile Asn	Ala Glu Gly Gly Gln	Asn Asn Ser Glu Glu Lys
425	430	435
Lys Glu Tyr Phe	Ile	
440		

<210> 62
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 62
 ggcttctgct gttgctcttc tccg 24

 <210> 63
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 63
 gtacactgtg accagtcagc 20

 <210> 64
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 64
atcatcacag attcccgagc 20

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
ggggcgggtg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50
cctcggggccc gaccgcag gaaagactga ggccgcggcc tgccccgcc 100
ggctccctgc gccgcgcgc cctcccgga cagaagatgt gctccagggt 150
ccctctgctg ctgccgctgc tctgctact ggccctgggg cctgggggtgc 200
agggctgccc atccggctgc cagtgcagcc agccacagac agtcttctgc 250
actgcccgcc aggggaccac ggtgccccga gacgtgccac ccgacacggt 300
ggggctgtac gtctttgaga acggcatcac catgctcgac gcaagcagct 350
ttgccggcct gccgggctg cagctcctgg acctgtcaca gaaccagatc 400

05943664-083001

0994364-083001

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450
cctcctggcc ctggagccccg gcatcctgga cactgccaac gtggaggcgc 500
tgcggctggc tggctctgggg ctgcagcagc tggacgaggg gctcttcagc 550
cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600
agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgcggctgg 650
ccggcaacac ccgcattgcc cagctgcggc ccgaggacct ggccggcctg 700
gctgccctgc aggagctgga tgtgagcaac ctaagcctgc aggccctgcc 750
tgggacctc tcgggcctct tccccgcct gcggctgctg gcagctgcc 800
gcaaccctt caactgcgtg tgccccctga gctggtttg ccctgggtg 850
cgcgagagcc acgtcacact ggccagcct gaggagacgc gctgccactt 900
cccgcccaag aacgctggcc ggctgctcct ggagcttgac tacgccgact 950
ttggctgccc agccaccacc accacagcca cagtgccac cagaggccc 1000
gtggtgcggg agcccacagc cttgtcttct agcttggtc ctacctggt 1050
tagccccaca gcgcgggcca ctgaggcccc cagcccgccc tccactgcc 1100
caccgactgt agggcctgtc cccagcccc aggactgcc accgtccacc 1150
tgctcaatg ggggcacatg ccacctgggg acacggcacc acctggcggtg 1200
cttgtgcccc gaaggcttca cgggcctgta ctgtgagagc cagatggggc 1250
aggggacacg gccagcct acaccagtca cgccgaggcc accacgggtcc 1300
ctgacctgg gcatcgagcc ggtgagcccc acctccctgc gcgtggggct 1350
gcagcgctac ctccagggga gctccgtgca gtcaggagc ctccgtctca 1400
cctatcgcaa cctatcgggc cctgataagc ggctgggtgac gctgcgactg 1450
cctgcctcgc tcgctgagta cacggtcacc cagctgcggc ccaacgccac 1500
ttactccgtc tgtgtcatgc ctttggggcc cgggcgggtg ccggagggcg 1550
aggaggcctg cggggaggcc cataacccc cagccgtcca ctccaaccac 1600
gccccagtca ccaggcccc cgagggcaac ctgccgtcc tcattgcgc 1650
cgccctggcc gcggtgctcc tggccgcgt ggctgcggtg ggggcagcct 1700
actgtgtgcg gcggggggcg gccatggcag cagcggctca ggacaaagg 1750
caggtggggc caggggctgg gccctggaa ctggaggag tgaaggctcc 1800
cttgagcca ggcccgaagg caacagagg cggtggagag gcctgcca 1850

0004364-033001

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900
 cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950
 cagctggggc cgggctctca gccagtgaga tggccagccc cctcctgctg 2000
 ccacaccacg taagttctca gtcccaacct cggggatgtg tgcagacagg 2050
 gctgtgtgac cacagctggg cctgtttccc tctggacctc ggtctcctca 2100
 tctgtgagat gctgtggccc agctgacgag ccctaacgtc cccagaaccg 2150
 agtgcctatg aggacagtgt ccgcctgcc ctccgcaacg tgcagtcctt 2200
 gggcacggcg ggccctgcca tgtgctggta acgcatgcct gggccctgct 2250
 gggctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300
 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450
 atttattctg ggaagatgtt tttcaaactc agagacaagg actttggttt 2500
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550
 aaaaa 2555

<210> 69
 <211> 598
 <212> PRT
 <213> Homo Sapien

<400> 69
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
 95 100 105
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110					115					120				
Ala	Leu	Arg	Leu	Ala	Gly	Leu	Gly	Leu	Gln	Gln	Leu	Asp	Glu	Gly
125					130					135				
Leu	Phe	Ser	Arg	Leu	Arg	Asn	Leu	His	Asp	Leu	Asp	Val	Ser	Asp
140					145					150				
Asn	Gln	Leu	Glu	Arg	Val	Pro	Pro	Val	Ile	Arg	Gly	Leu	Arg	Gly
155					160					165				
Leu	Thr	Arg	Leu	Arg	Leu	Ala	Gly	Asn	Thr	Arg	Ile	Ala	Gln	Leu
170					175					180				
Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp
185					190					195				
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly
200					205					210				
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe
215					220					225				
Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu
230					235					240				
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe
245					250					255				
Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala
260					265					270				
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr
275					280					285				
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu
290					295					300				
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro
305					310					315				
Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln
320					325					330				
Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys
335					340					345				
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly
350					355					360				
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg
365					370					375				
Pro	Ser	Pro	Thr	Pro	Val	Thr	Pro	Arg	Pro	Pro	Arg	Ser	Leu	Thr
380					385					390				
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu
395					400					405				

<400> 71
cggttctggg gacgttaggg ctcg 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
ctgcccaccg tccacctgcc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
ggcactagga caaccttctt cccttctgca ccactgcccg tacccttacc 50
cgccccgcca cctccttgct accccactct tgaaaccaca gctgttgga 100
gggtccccag ctcatgccag cctcatctcc tttcttgcta gccccaaaag 150
ggcctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200
gccctctggt tgagttgggg ggcagctctg ggggcccgtgg cttgtgccat 250
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
gccggctgca ggggacagga ggcccctccc agaatgggga agggatatccc 350
tggcagagtc tcccggagca gagttccgat gccctggaag cctgggagaa 400

FOOEBD"49E4660

tggggagaga tcccgaaaa ggagagcagt gctcacccaa aaacagaaga 450
 agcagcactc tgtcctgcac ctggttccca ttaacgccac ctccaaggat 500
 gactccgatg tgacagaggt gatgtggcaa ccagctctta ggcgtgggag 550
 aggcctacag gcccaaggat atggtgtccg aatccaggat gctggagttt 600
 atctgctgta tagccaggtc ctgtttcaag acgtgacttt caccatgggt 650
 cagggtggtgt ctcgagaagg ccaaggaagg caggagactc tattccgatg 700
 tataagaagt atgccctccc acccggaaccg ggctacaac agctgctata 750
 gcgcagggtgt cttccattta caccaagggg atattctgag tgcataatt 800
 ccccgggcaa gggcgaaaact taacctctct ccacatggaa ctttctggg 850
 gtttgtgaaa ctgtgattgt gttataaaaa gtggctccca gcttggaga 900
 ccagggtggg tacatactgg agacagccaa gagctgagta tataaaggag 950
 agggaatgtg caggaacaga ggcattcttc tgggtttggc tccccgttc 1000
 tcacttttcc cttttcattc ccaccccta gactttgatt ttacggatat 1050
 cttgcttctg ttccccatgg agctccg 1077

<210> 76
 <211> 250
 <212> PRT
 <213> Homo Sapien

<400> 76
 Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro
 1 5 10 15
 Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala
 20 25 30
 Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala
 35 40 45
 Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg
 50 55 60
 Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly
 65 70 75
 Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala
 80 85 90
 Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala
 95 100 105
 Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu
 110 115 120

Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
				125					130					135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
				140					145					150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
				155					160					165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
				170					175					180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
				185					190					195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
				200					205					210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
				215					220					225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
				230					235					240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
				245					250					

```
<210> 77
<211> 2849
<212> DNA
<213> Homo Sapien
```


094364-033001

caggctcagc aggggccagg ggccacactg gacccaaagg gcagaagggc 700
tccatggggg cccctgggga gcggtgcaag agccactacg ccgccttttc 750
ggtagggccg aagaagccca tgcacagcaa ccactactac cagacggtga 800
tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttcacc 850
ggcaagttct actgctacgt gcccggcctc tactttttca gcctcaacgt 900
gcacacctgg aaccagaagg agacctacct gcacatcatg aagaacgagg 950
aggaggtggt gatcttggtc gcgcaggtgg gcgaccgcag catcatgcaa 1000
agccagagcc tgatgctgga gctgcgagag caggaccagg tgtgggtacg 1050
cctctacaag gggaacgtg agaacgccat cttcagcgag gagctggaca 1100
cctacatcac cttcagtggc tacctgggtc agcacgccac cgagccctag 1150
ctggccggcc acctcctttc ctctcgccac cttccacccc tgcgctgtgc 1200
tgaccccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250
gcattcagtg agacgccctg cacacacaga aagccaaagc gatcggtgct 1300
cccagatccc gcagcctctg gagagagctg acggcagatg aatcaccag 1350
ggcggggcac ccgcgagaac cctctgggac cttccgcggc cctctctgca 1400
cacatcctca agtgaccccg cacggcgaga cgcgggtggc ggcagggcgt 1450
cccaggggtg gccaccgcgg ctccagtcct tggaaataat taggcaaatt 1500
ctaaagggtc caaaaggagc aaagtaaacc gtggaggaca aagaaaagg 1550
ttgttatttt tgtctttcca gccagcctgc tggctcccaa gagagaggcc 1600
ttttcagttg agactctgct taagagaaga tccaaagtta aagctctggg 1650
gtcaggggag gggccggggg caggaaacta cctctggctt aattctttta 1700
agccacgtag gaactttctt gagggatagg tggacctga catccctgtg 1750
gccttgccca agggctctgc tggcttttct gattcacagc tgcgaggtga 1800
tgggggctgg ggccccaggc gtcagcctcc cagagggaca gctgagcccc 1850
ctgccttggc tccaggttgg tagaagcagc cgaagggtc ctgacagtgg 1900
ccagggacct ctgggtcccc caggcctgca gatgtttcta tgaggggcag 1950
agtccttgg tacatccatg tgtggctctg ctccaccct gtgccacccc 2000
agagccctgg ggggtggtct ccatgcctgc caccctggca tcggctttct 2050
gtgccgcctc ccacacaaat cagccccaga agggcccggg gccttggctt 2100

ctgtttttta	taaaacacct	caagcagcac	tgcagtctcc	catctcctcg	2150
tgggctaagc	atcaccgctt	ccacgtgtgt	tgtgttggtt	ggcagcaagg	2200
ctgatccaga	ccccttctgc	ccccactgcc	ctcatccagg	cctctgacca	2250
gtagcctgag	aggggctttt	tctaggcttc	agagcagggg	agagctggaa	2300
ggggctagaa	agctcccgtc	tgtctgtttc	tcaggctcct	gtgagcctca	2350
gtcctgagac	cagagtcaag	aggaagtaca	cgtcccaatc	acccgtgtca	2400
ggattcactc	tcaggagctg	ggtggcagga	gaggcaatag	cccctgtggc	2450
aattgcagga	ccagctggag	cagggttgcg	gtgtctccac	ggtgctctcg	2500
ccctgcccac	ggccacccca	gactctgata	tccaggaacc	ccatagcccc	2550
tctccacctc	accccatggt	gatgcccagg	gtcactcttg	ctaccgctg	2600
ggcccccaaa	cccccgctgc	ctctcttctt	tccccccatc	ccccacctgg	2650
ttttgactaa	tcctgcttcc	ctctctgggc	ctggctgccg	ggatctgggg	2700
tccttaagtc	cctctcttta	aagaacttct	gcgggtcaga	ctctgaagcc	2750
gagttgctgt	gggcgtgccc	ggaagcagag	cgccacactc	gctgcttaag	2800
ctccccagc	tctttccaga	aaacattaaa	ctcagaattg	tgttttcaa	2849

```
<210> 78
<211> 281
<212> PRT
<213> Homo Sapien
```

Met	Gly	Ser	Arg	Gly	Gln	Gly	Leu	Leu	Leu	Ala	Tyr	Cys	Leu	Leu
1				5					10					15
Leu	Ala	Phe	Ala	Ser	Gly	Leu	Val	Leu	Ser	Arg	Val	Pro	His	Val
				20					25					30
Gln	Gly	Glu	Gln	Gln	Glu	Trp	Glu	Gly	Thr	Glu	Glu	Leu	Pro	Ser
				35					40					45
Pro	Pro	Asp	His	Ala	Glu	Arg	Ala	Glu	Glu	Gln	His	Glu	Lys	Tyr
				50					55					60
Arg	Pro	Ser	Gln	Asp	Gln	Gly	Leu	Pro	Ala	Ser	Arg	Cys	Leu	Arg
				65					70					75
Cys	Cys	Asp	Pro	Gly	Thr	Ser	Met	Tyr	Pro	Ala	Thr	Ala	Val	Pro
				80					85					90
Gln	Ile	Asn	Ile	Thr	Ile	Leu	Lys	Gly	Glu	Lys	Gly	Asp	Arg	Gly
				95					100					105
Asp	Arg	Gly	Leu	Gln	Gly	Lys	Tyr	Gly	Lys	Thr	Gly	Ser	Ala	Gly

<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccgggtgctt ggcgtgctgt gaccccggtg cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
gcggagcatc cgctgcggtc ctcgccgaga ccccgcgcg gattcgccgg 50
tccttccccg gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
gaccaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250
tgacttaac tttggtaata atttgcctcc tgacactaag gctgtctgct 300
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
gtcatctctt tctaaggga tcagaggcaa tgagcccgtg tatacttcaa 400
ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
acccaactgc tacctatctt tctgtcccaa cgaggaagcc tgtccattga 550
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
tttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
tttctctgta tcaagaaata gctcatctgc tgctgaaaa tgtgagtgcg 900
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

05943664.033001

05943664-083001

tctcagcctc ccacgaccct catttctaca gtttttacac gggctgcggc 1100
 tacactccaa gcaatggcta caacagcagt tctgactacc acctttcagg 1150
 cacctacgga ctcgaaaggc agcttagaaa ccataccggt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250
 tatgtcaa at gtggagtctt ccactatgaa taaaactgct tcctgggaag 1300
 gtagggaggc cagtccaggc agttcctccc agggcagtg tccagaaaat 1350
 cagtacggcc ttccatttga aaaatggctt cttatcgggt cctgctctt 1400
 tgggtgctctg ttctgggtga taggcctcgt cctcctgggt agaactcctt 1450
 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500
 gggatctatg tggacatcta aggatggaac tcgggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgctagtctt 1600
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgtcttg ttgcccaggc tggagtgcag 1700
 tagcacgac tcggtctca ccgcaacctc cgtctcctgg gttcaagcga 1750
 ttctcctgcc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatttttga tttttagtag agacgggggt tcaccatgtt 1850
 ggtcaggctg gtctcaaaact cctgacctag tgatccaccc tcctcggcct 1900
 cccaaagtgc tgggattaca ggcagagcc accacagctg gcccccttct 1950
 gttttatgtt tggtttttga gaaggaatga agtgggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaattc aactggcttt 2100
 tatgcaaaga aacaggtttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tgtttatatc aatttcta at ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 83
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 83
 Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile
 1 5 10 15

Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu	
				20					25						30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu	
				35					40						45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln	
				50					55						60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly	
				65					70						75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala	
				80					85						90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala	
				95					100						105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile	
				110					115						120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu	
				125					130						135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val	
				140					145						150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp	
				155					160						165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp	
				170					175						180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu	
				185					190						195
Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205						210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220						225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235						240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250						255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265						270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280						285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295						300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu	Ile Ser Asn Leu Thr Leu	
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr	Ala Leu Ser Met Ser Asn	
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr	Ala Ser Trp Glu Gly Arg	
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln	Gly Ser Val Pro Glu Asn	
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp	Leu Leu Ile Gly Ser Leu	
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile	Gly Leu Val Leu Leu Gly	
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg	Lys Arg Tyr Ser Arg Leu	
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val	Asp Ile	
425	430	

<210> 84
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 84
 agggaggatt atccttgacc tttgaagacc 30

 <210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 85
 gaagcaagtg cccagctc 18

 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 86
 cgggtccctg ctctttgg 18

<210> 87
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 87
 caccgtagct gggagcgcac tcac 24

<210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 88
 agtgaagtc aagctccc 18

<210> 89
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 89
 gcttctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90
 <211> 957
 <212> DNA
 <213> Homo Sapien

<400> 90
 cctggaagat gcgccattg gctggtggcc tgctcaaggt ggtgttcgtg 50
 gtcttcgcct ccttggtgtgc ctggtattcg gggtagctgc tcgcagagct 100
 cattccagat gcacccctgt ccagtgtgc ctatagcatc cgcagcatcg 150
 gggagaggcc tgtcctcaaa gctccagtc ccaaaaggca aaaatgtgac 200
 cactggactc cctgcccatac tgacacctat gcctacaggt tactcagcgg 250
 aggtggcaga agcaagtacg ccaaaatctg ctttgaggat aacctactta 300
 tgggagaaca gctgggaaat gttgccagag gaataaacat tgccattgtc 350
 aactatgtaa ctgggaatgt gacagcaaca cgatgttttg atatgtatga 400
 aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactgaat 500

aacgatgcc aagaatgccat agaagcactt ggaagtaaag aaatcaggaa 550
catgaaattc aggtctagct gggatatttat tgcagcaaaa ggcttggaac 600
tcccttccga aattcagaga gaaaagatca accactctga tgctaagaac 650
aacagatatt ctggctggcc tgcagagatc cagatagaag gctgcatacc 700
caaagaacga agctgacact gcagggctcct gagtaaattgt gttctgtata 750
aacaaatgca gctggaatcg ctcaagaatc ttatTTTTTct aaatccaaca 800
gcccataatt gatgagtatt ttgggtttgt tgtaaacc aaacatttg 850
ctagttgtat caaatcttg tacgcagtat ttttatacca gtattttatg 900
tagtgaagat gtcaattagc aggaaactaa aatgaatgga aattcttaaa 950
aaaaaaaa 957

```
<210> 91
<211> 235
<212> PRT
<213> Homo Sapien
```

Asp Ala Lys Asn Ala Ile Glu Ala Leu Gly Ser Lys Glu Ile Arg
 170 175 180
 Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly
 185 190 195
 Leu Glu Leu Pro Ser Glu Ile Gln Arg Glu Lys Ile Asn His Ser
 200 205 210
 Asp Ala Lys Asn Asn Arg Tyr Ser Gly Trp Pro Ala Glu Ile Gln
 215 220 225
 Ile Glu Gly Cys Ile Pro Lys Glu Arg Ser
 230 235

<210> 92
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 92
 aatgtgacca ctggactccc 20

<210> 93
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 aggcttgga ctccttc 18

<210> 94
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 94
 aagattcttg agcgattcca gctg 24

<210> 95
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 95
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

THE UNIVERSITY OF CHICAGO

<400> 96
ctcaagaagc acgcgtactg c 21

<220>
<223> Synthetic oligonucleotide probe

```
<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence
```

<400> 98
catccaggct cgccactg 18

<220>
<223> Synthetic oligonucleotide probe

```
<210> 100
<211> 25
<212> DNA
<213> Artificial Sequence
```

```
<400> 100
atgctgccag acctgatcgc agaca 25
```

67

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 101

gggcagaaat ccagccact 19

<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 102

cccttcgcct gcttttga 18

<210> 103

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gccatctaatt tgaagcccat cttccca 27

<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104

ctggcgggtgt cctctcctt 19

<210> 105

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 105

cctcgggtctc ctcctctgtg a 21

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

0943664-08304

[illegible]

```
<210> 107
<211> 21
<212> DNA
<213> Artificial Sequence
```

```
<400> 107
ctcataggca ctcggttctg g 21
```

```
<210> 108
<211> 19
<212> DNA
<213> Artificial Sequence
```

<400> 108
tggctcccag cttggaaga 19

```
<210> 109
<211> 30
<212> DNA
<213> Artificial Sequence
```

<400> 109
caqctcttgg ctgtctccag tatgtacca 30

```
<210> 110
<211> 21
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

<400> 110
gatgcctctg ttctgcaca t 21

```
<210> 111
<211> 48
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

<400> 111

ggattctaatt acgactcact atagggctgc ccgcaacccc ttcaactg 48

<210> 112

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 112

ctatgaaatt aaccctcact aaagggaccg cagctgggtg accgtgta 48

<210> 113

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 113

ggattctaatt acgactcact atagggccgc cccgccacct cct 43

<210> 114

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 114

ctatgaaatt aaccctcact aaagggactc gagacaccac ctgaccca 48

<210> 115

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 115

ggattctaatt acgactcact atagggccca aggaaggcag gagactct 48

<210> 116

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide probe

<400> 116

ctatgaaatt aaccctcact aaagggacta ggggggtggga atgaaaag 48

<210> 117

TOP SECRET 4994550

<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 117
ggattctaatacgcactcactatagggccccctgagctctcccgtgta 48

<210> 118
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 118
ctatgaaattaacccctcactaaaggggaaggctcgccactggtcgtaga 48

<210> 119
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 119
ggattctaatacgcactcactatagggcaaggagccgggacccaggaga 48

<210> 120
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 120
ctatgaaattaacccctcactaaagggagggggcccttggtgctgagt 47

FOOEBO "4994660